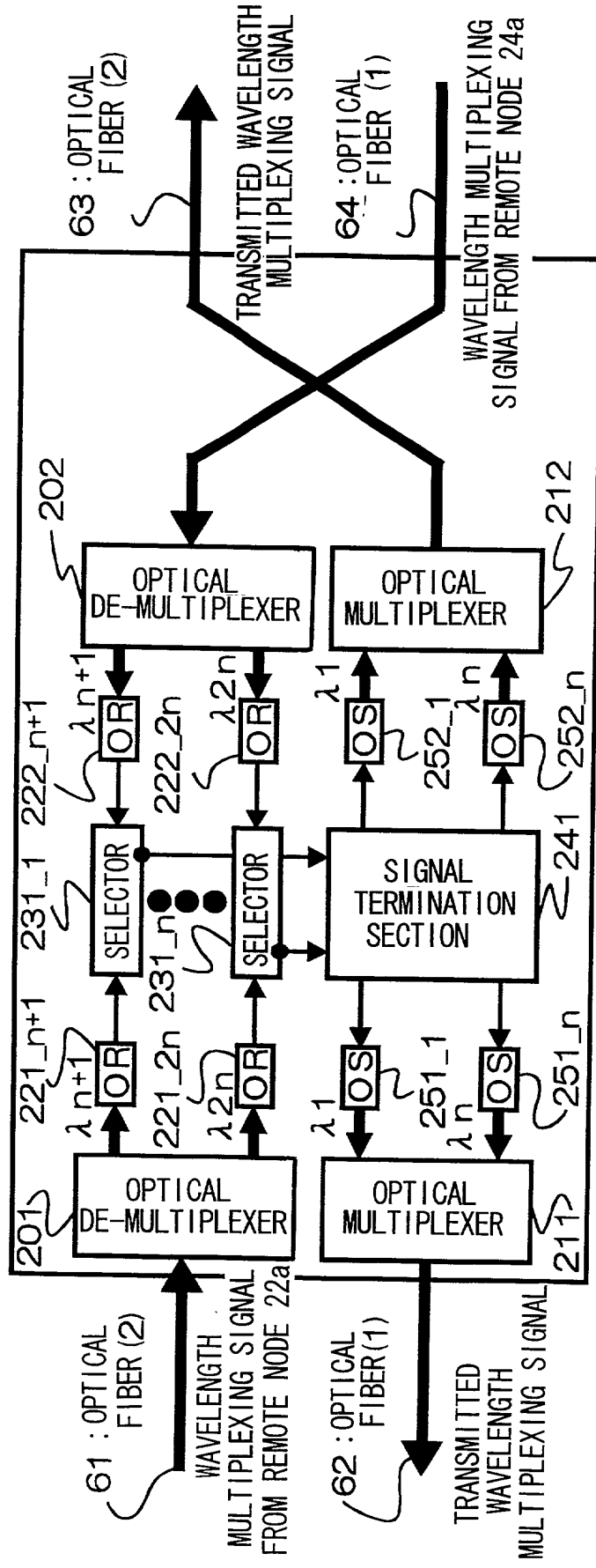


FIG. 3

FIG. 4



21a : CENTER NODE

FIG. 5

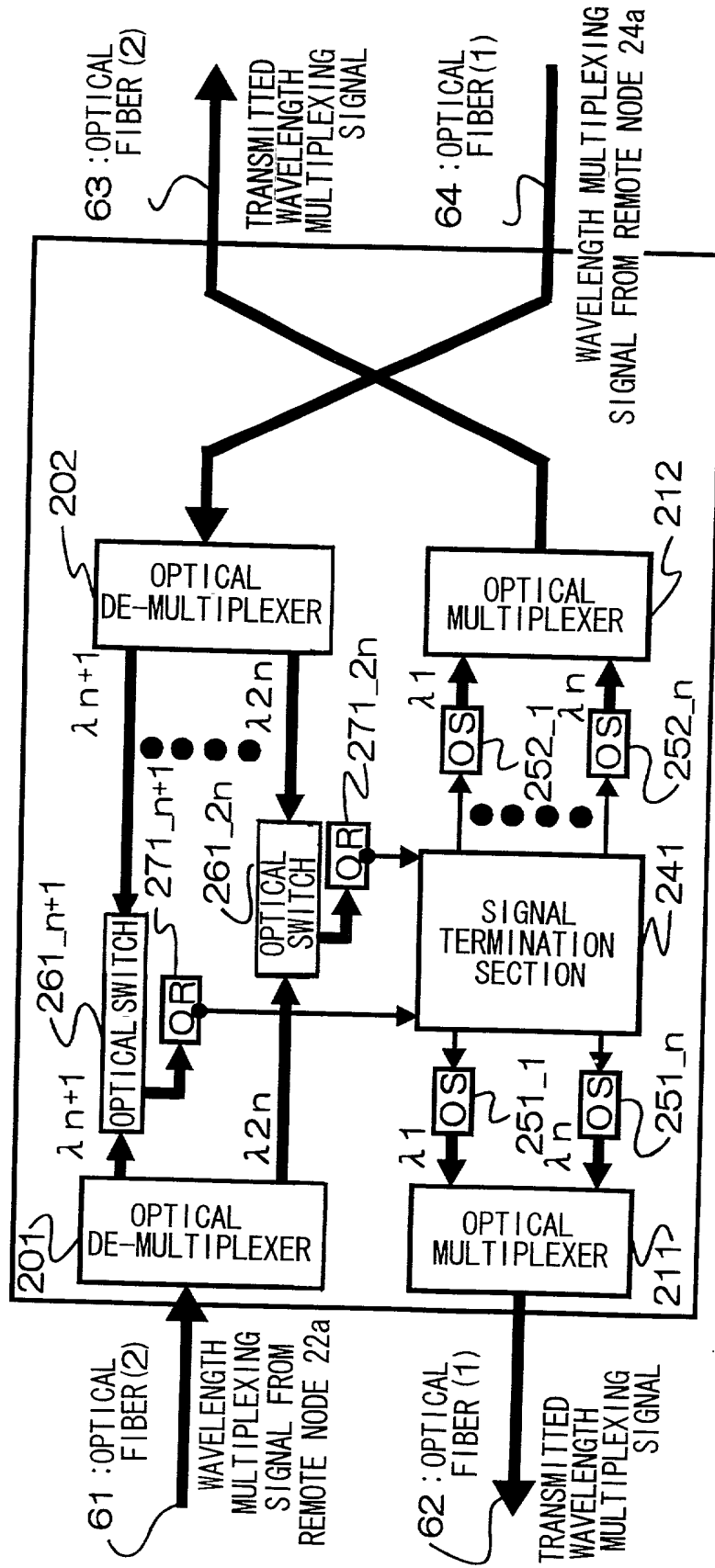
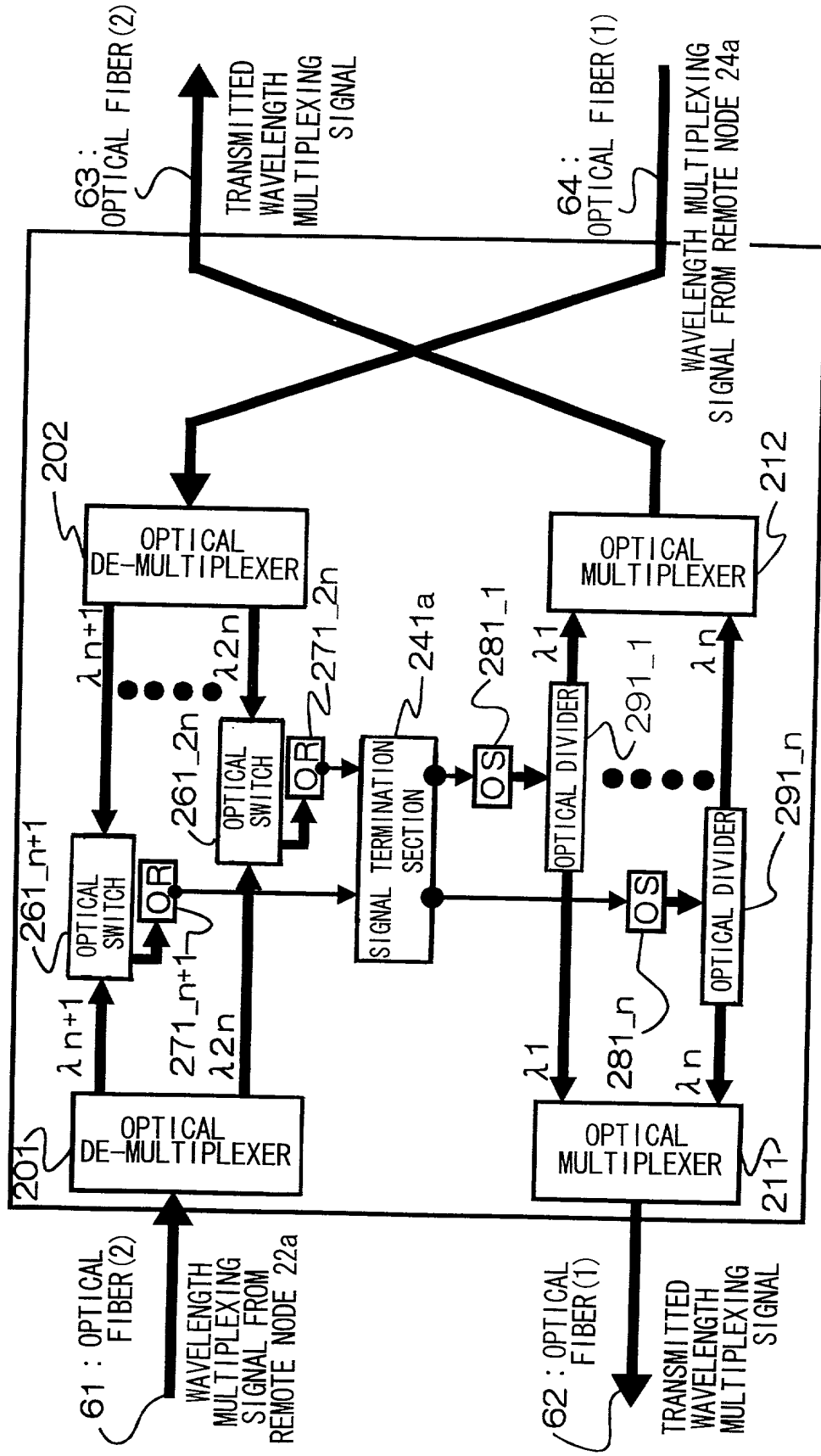
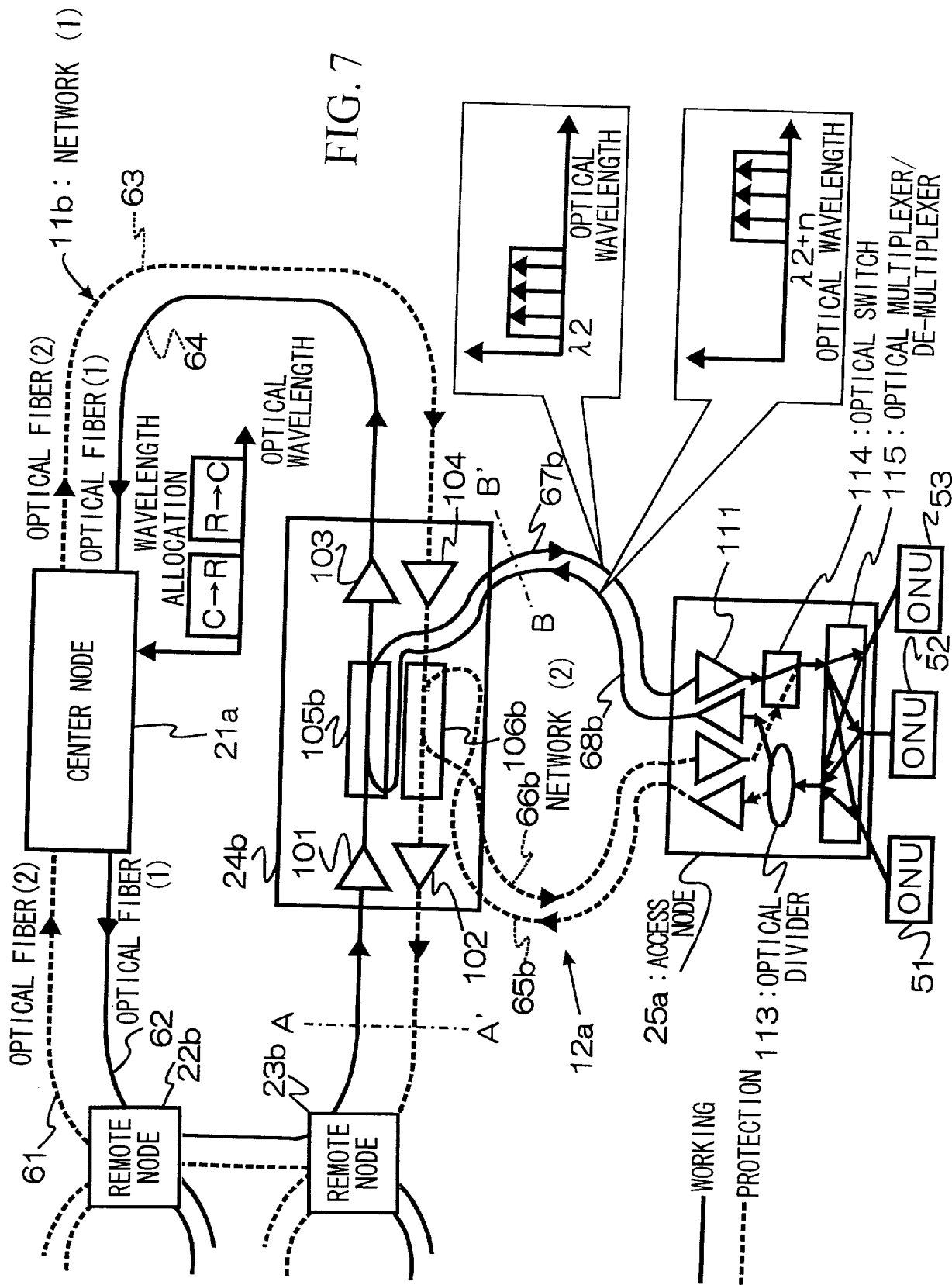
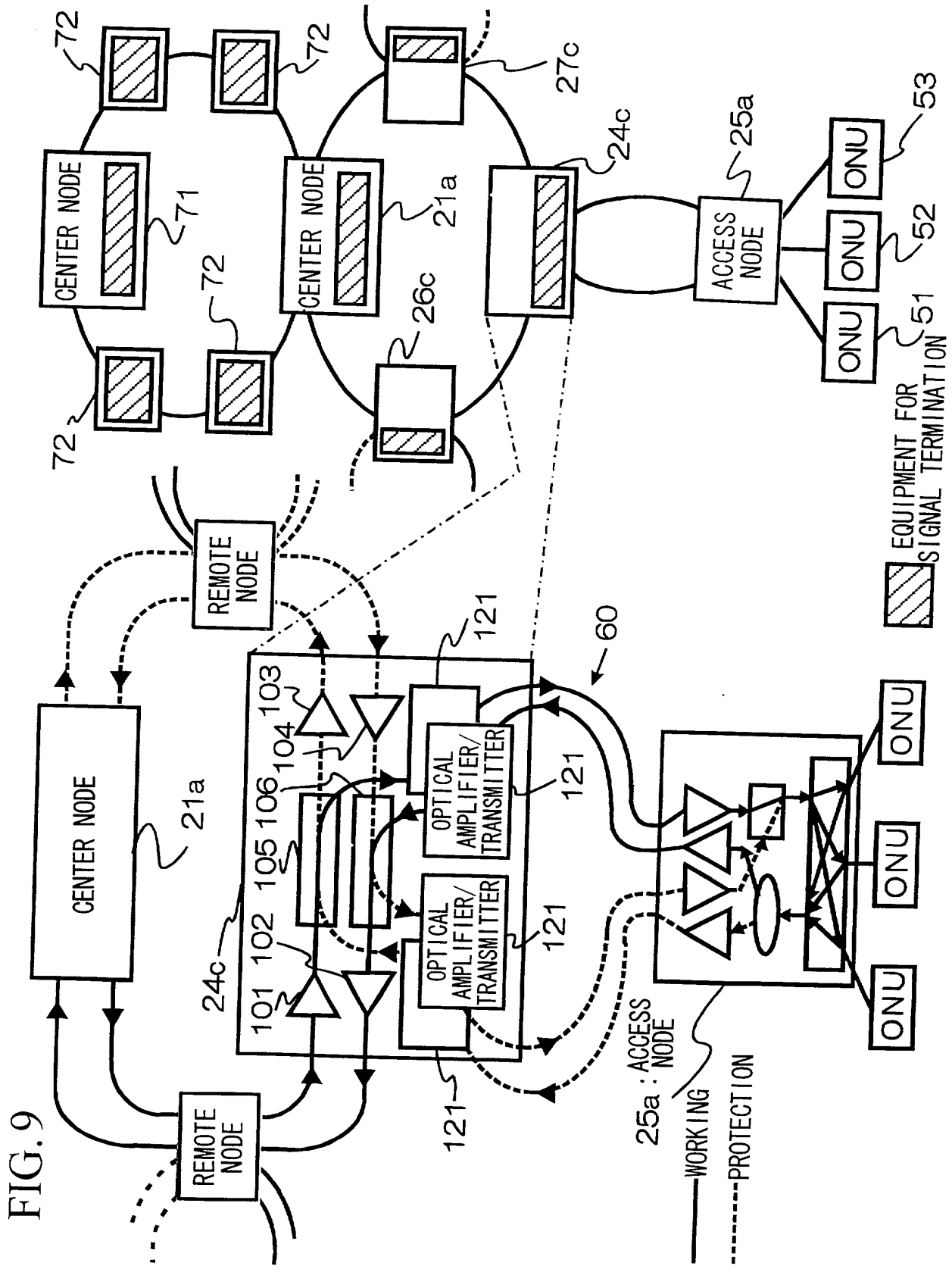


FIG. 6



21a: CENTER NODE





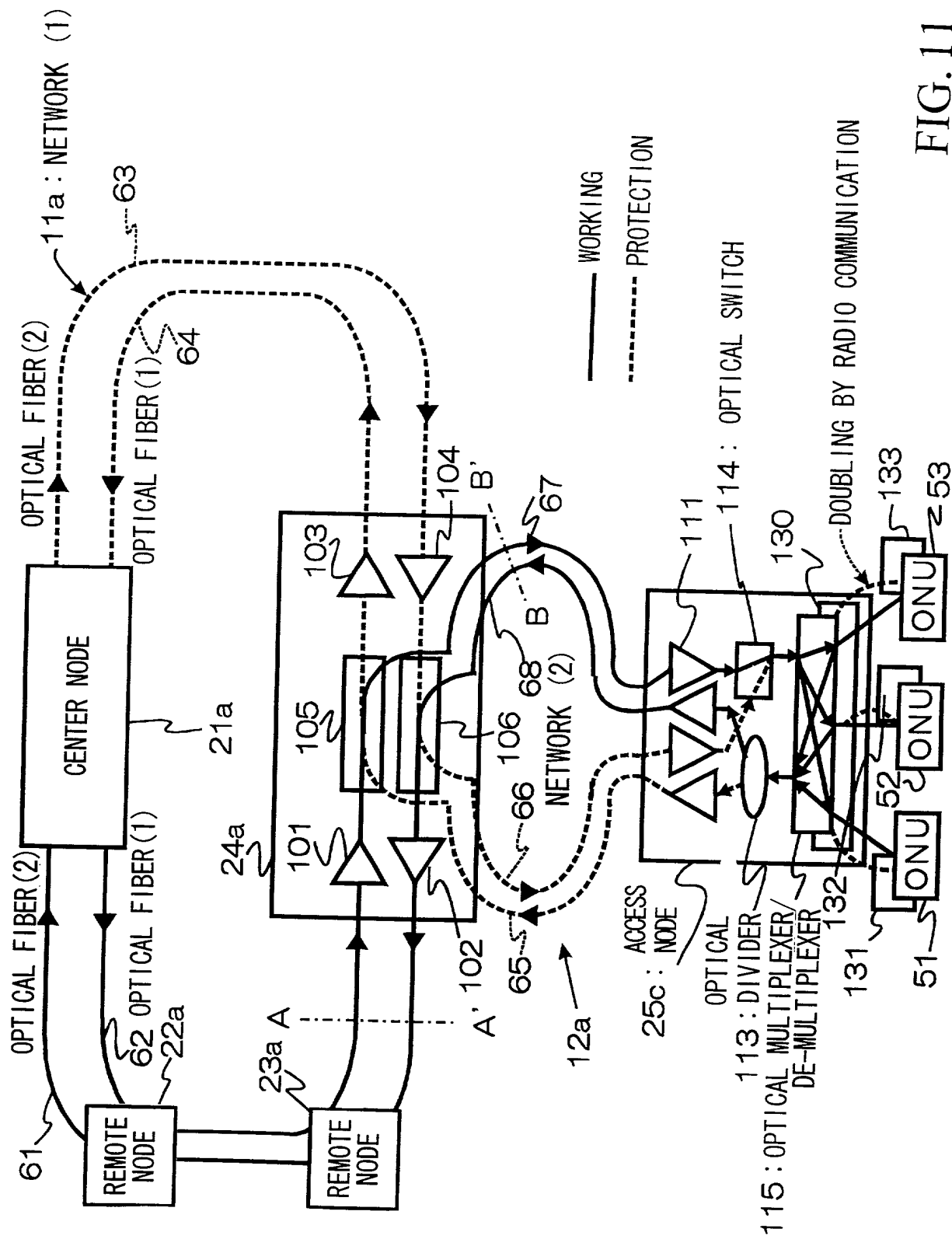


FIG. 11

FIG. 12

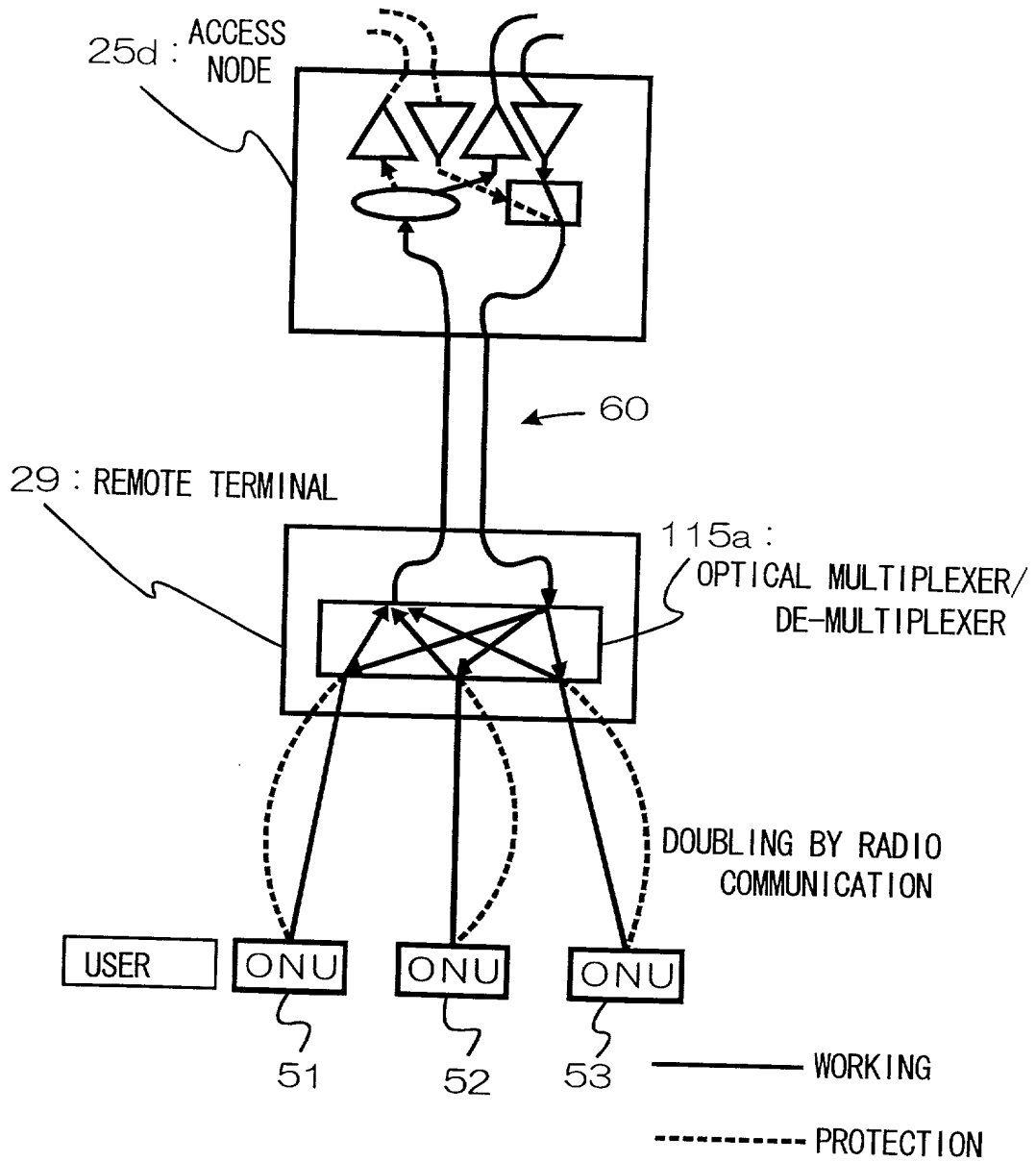


FIG. 13

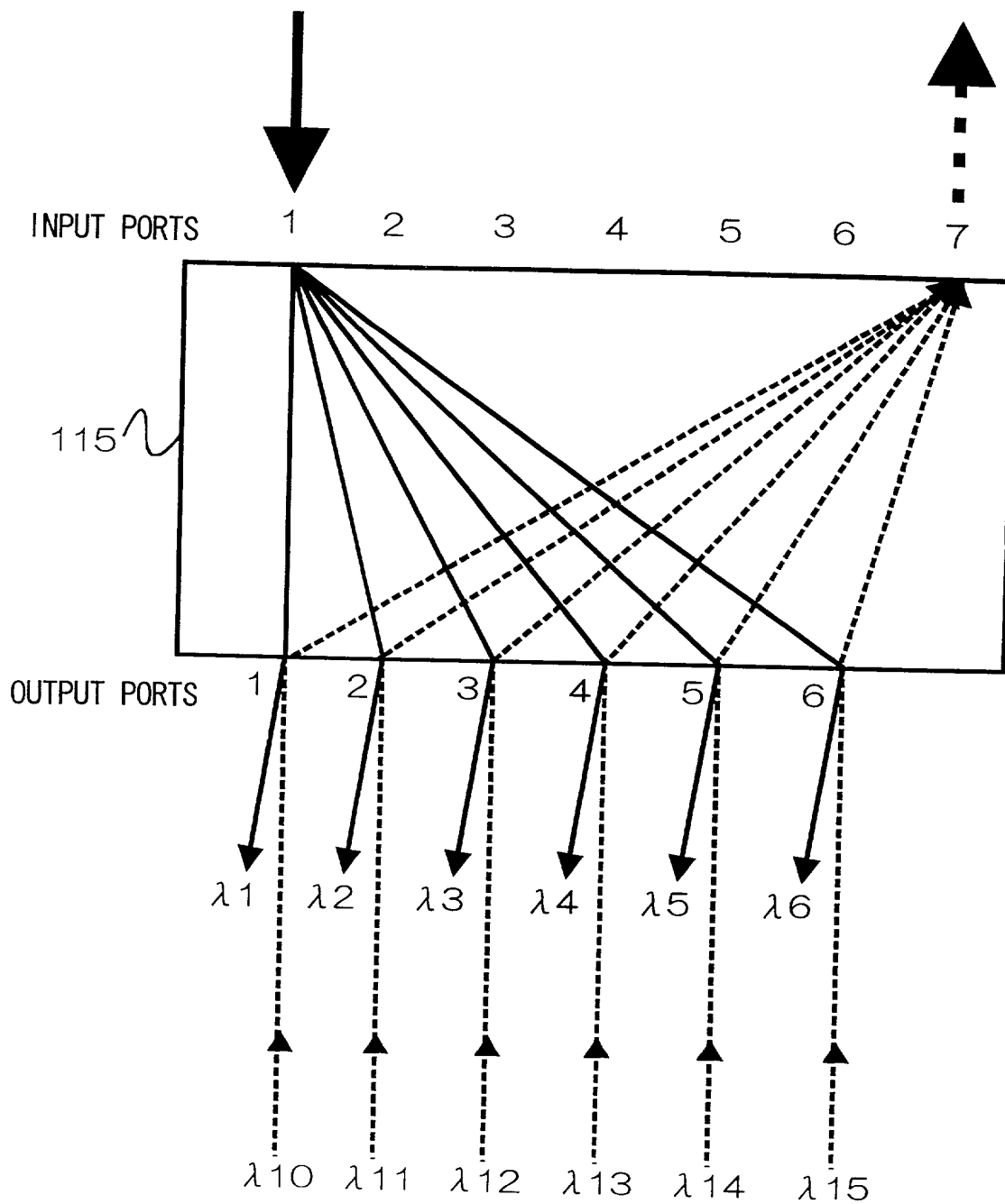


FIG. 14

EXAMPLE OF RELATIONSHIP BETWEEN INPUT/OUTPUT PORTS AND AWG WAVELENGTH

INPUT PORTS	OUTPUT PORTS								
	1	2	3	4	5	6	7	8	9
	1	$\lambda 1$	$\lambda 2$	$\lambda 3$	$\lambda 4$	$\lambda 5$	$\lambda 6$	$\lambda 7$	$\lambda 8$
	2	$\lambda 15$	$\lambda 1$	$\lambda 2$	$\lambda 3$	$\lambda 4$	$\lambda 5$	$\lambda 6$	$\lambda 7$
	3	$\lambda 14$	$\lambda 15$	$\lambda 1$	$\lambda 2$	$\lambda 3$	$\lambda 4$	$\lambda 5$	$\lambda 6$
	4	$\lambda 13$	$\lambda 14$	$\lambda 15$	$\lambda 1$	$\lambda 2$	$\lambda 3$	$\lambda 4$	$\lambda 5$
	5	$\lambda 12$	$\lambda 13$	$\lambda 14$	$\lambda 15$	$\lambda 1$	$\lambda 2$	$\lambda 3$	$\lambda 4$
	6	$\lambda 11$	$\lambda 12$	$\lambda 13$	$\lambda 14$	$\lambda 15$	$\lambda 1$	$\lambda 2$	$\lambda 3$
	7	$\lambda 10$	$\lambda 11$	$\lambda 12$	$\lambda 13$	$\lambda 14$	$\lambda 15$	$\lambda 1$	$\lambda 2$
	8	$\lambda 9$	$\lambda 10$	$\lambda 11$	$\lambda 12$	$\lambda 13$	$\lambda 14$	$\lambda 15$	$\lambda 1$
	9	$\lambda 8$	$\lambda 9$	$\lambda 10$	$\lambda 11$	$\lambda 12$	$\lambda 13$	$\lambda 14$	$\lambda 15$

FIG. 15

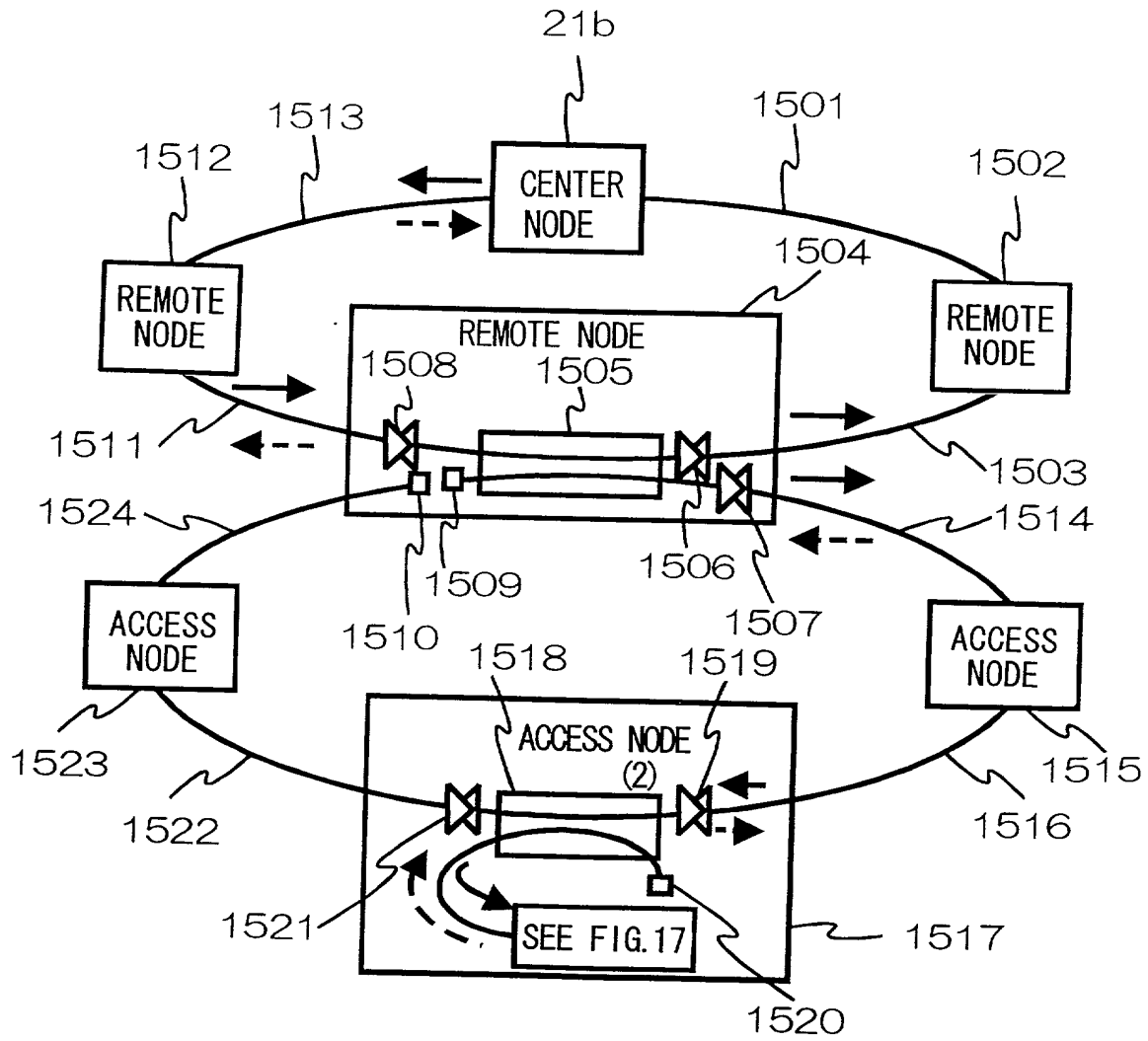


FIG. 16

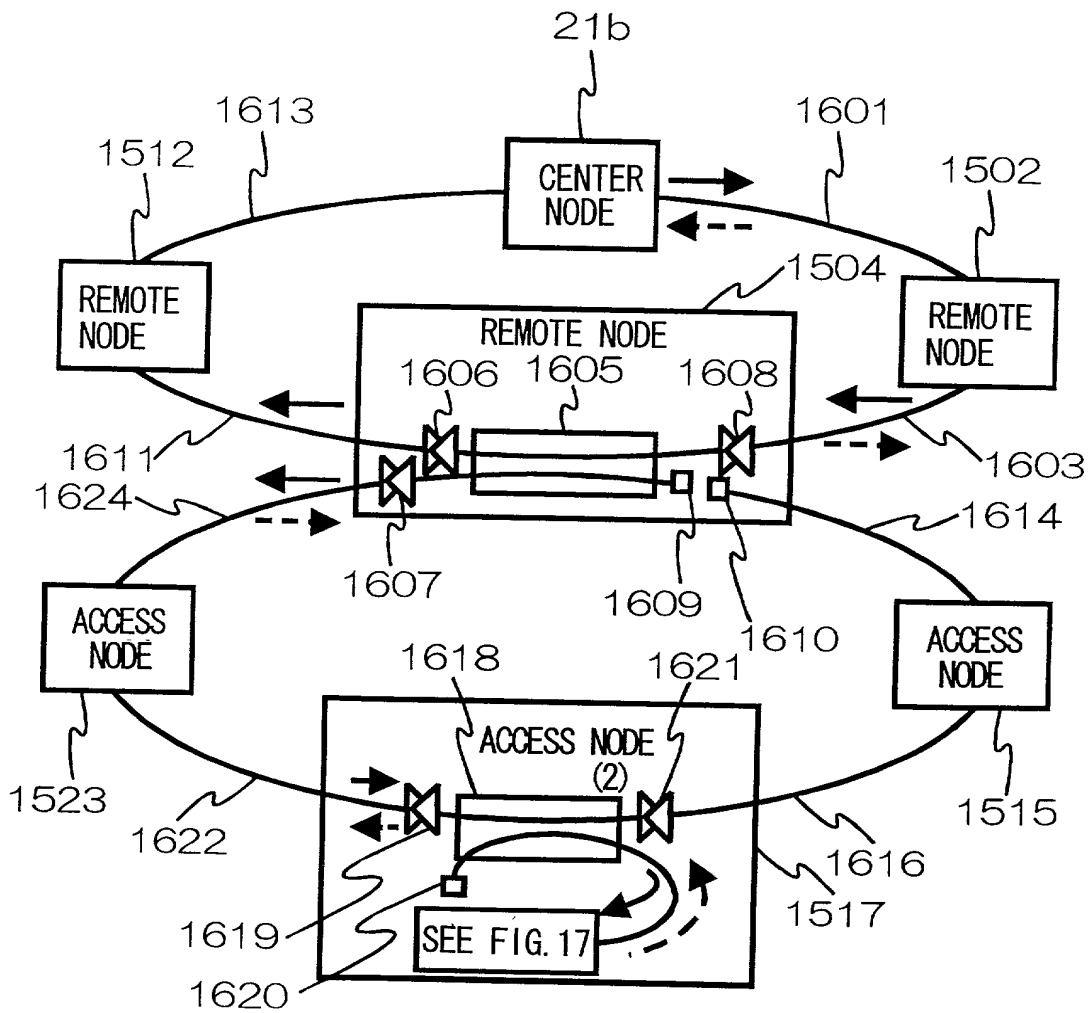


FIG. 17

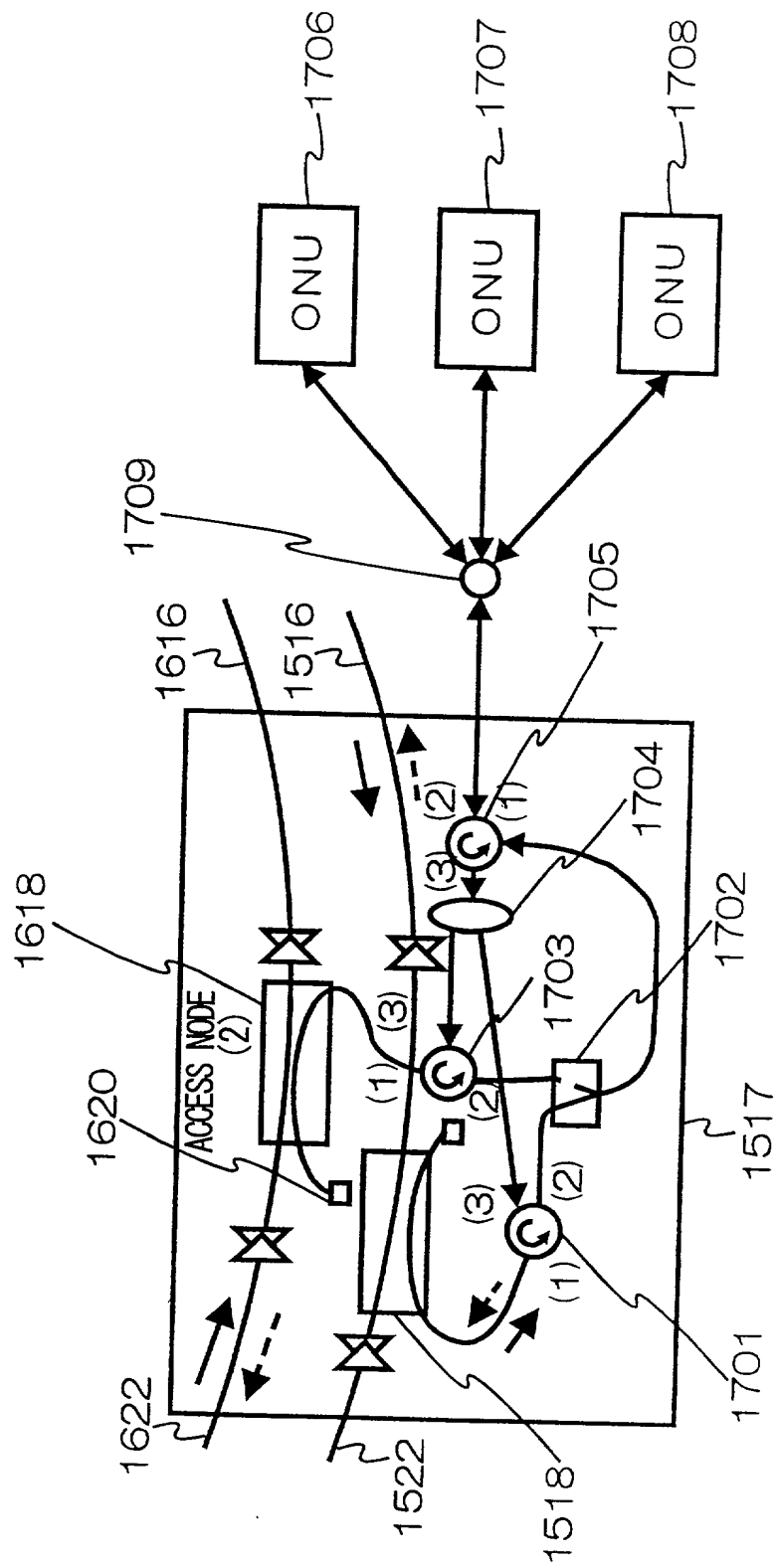


FIG. 18

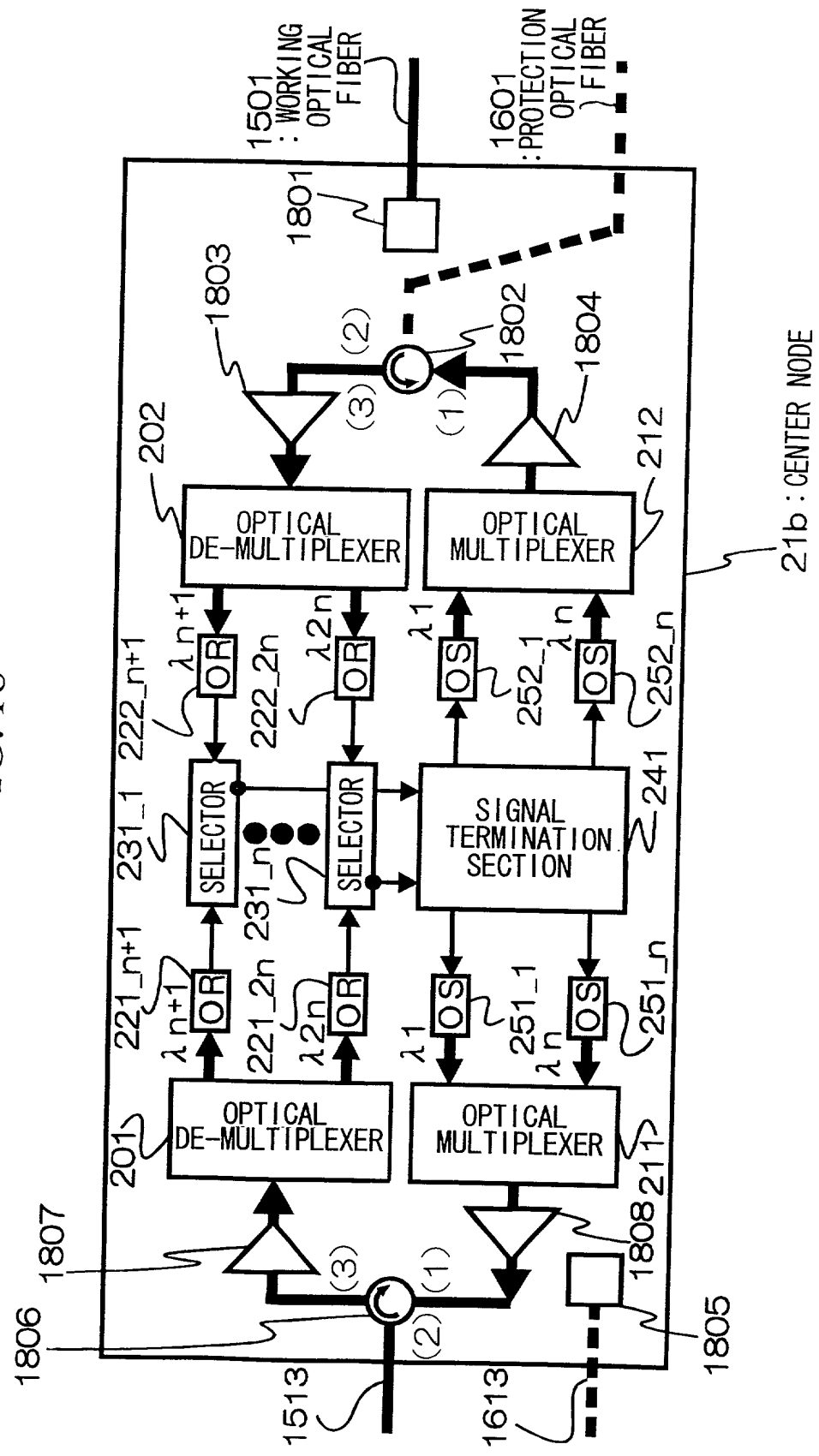


FIG. 19

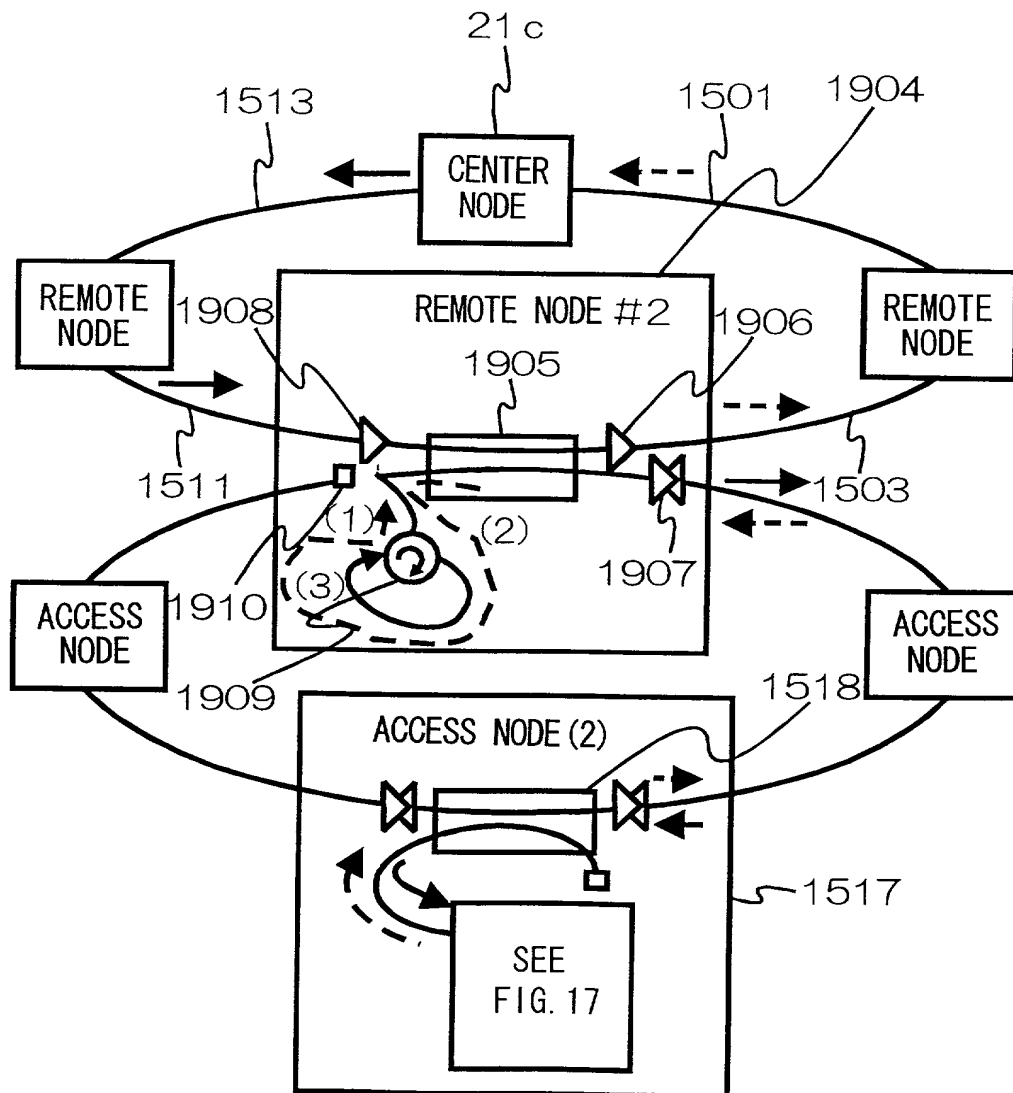


FIG. 20

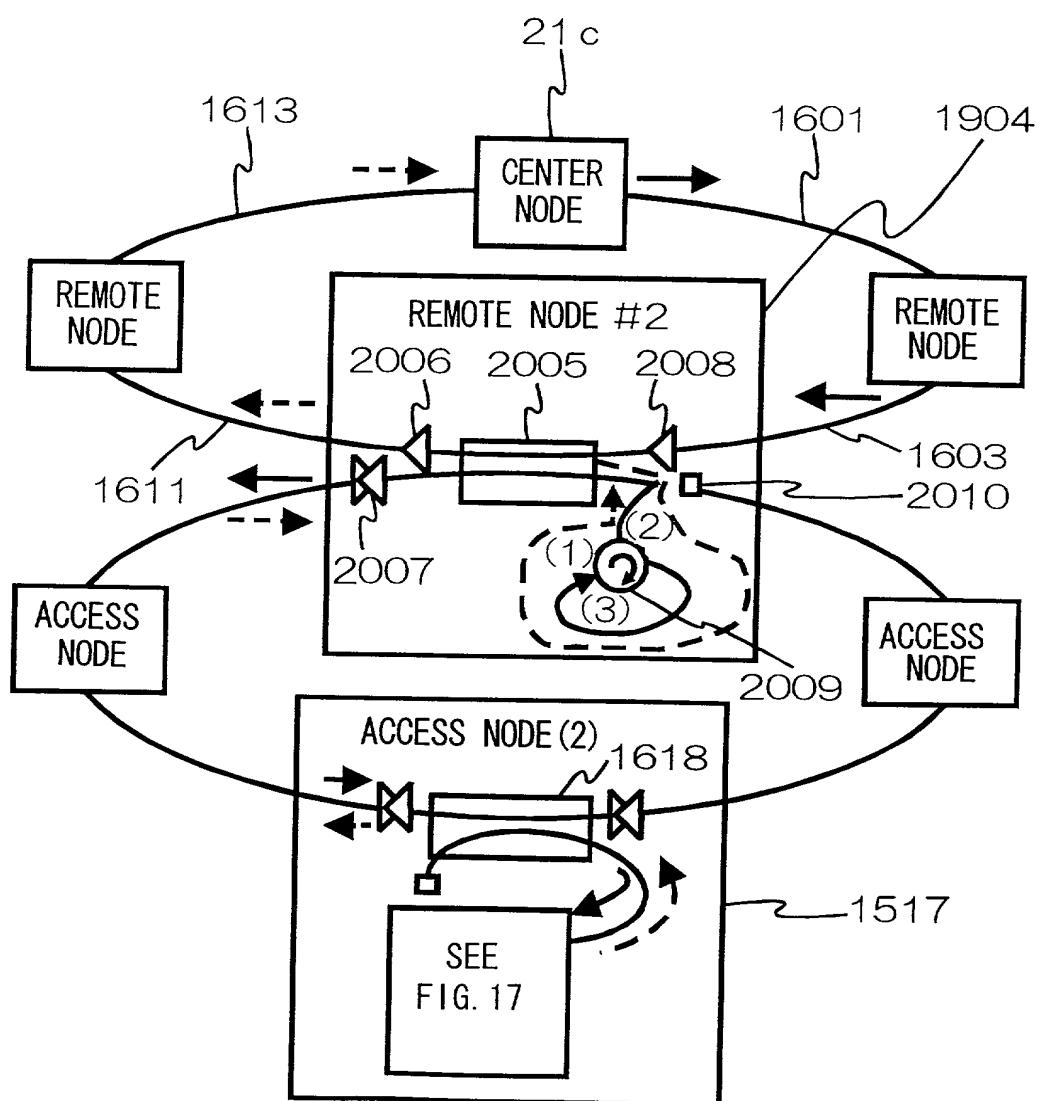
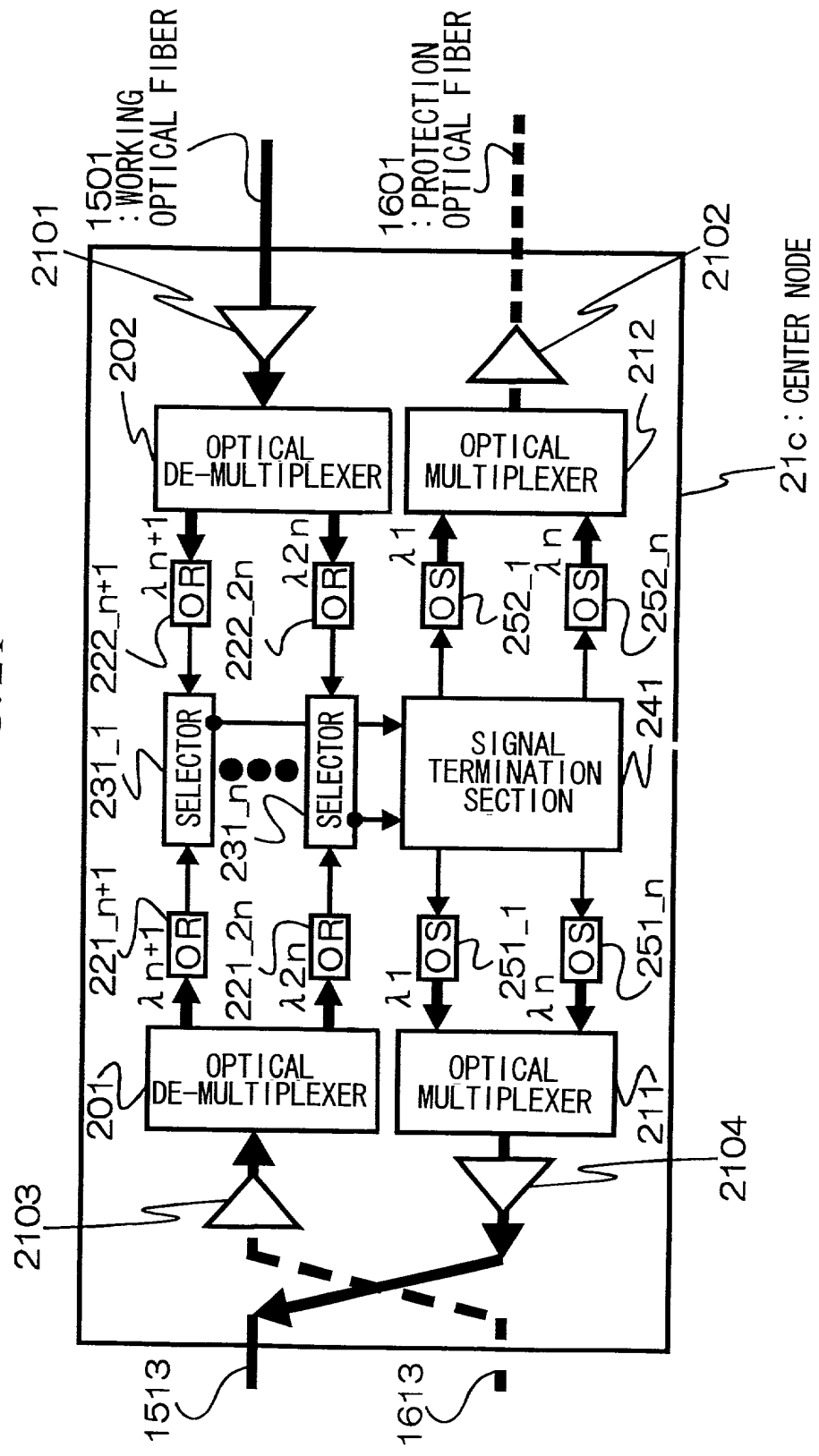


FIG. 21



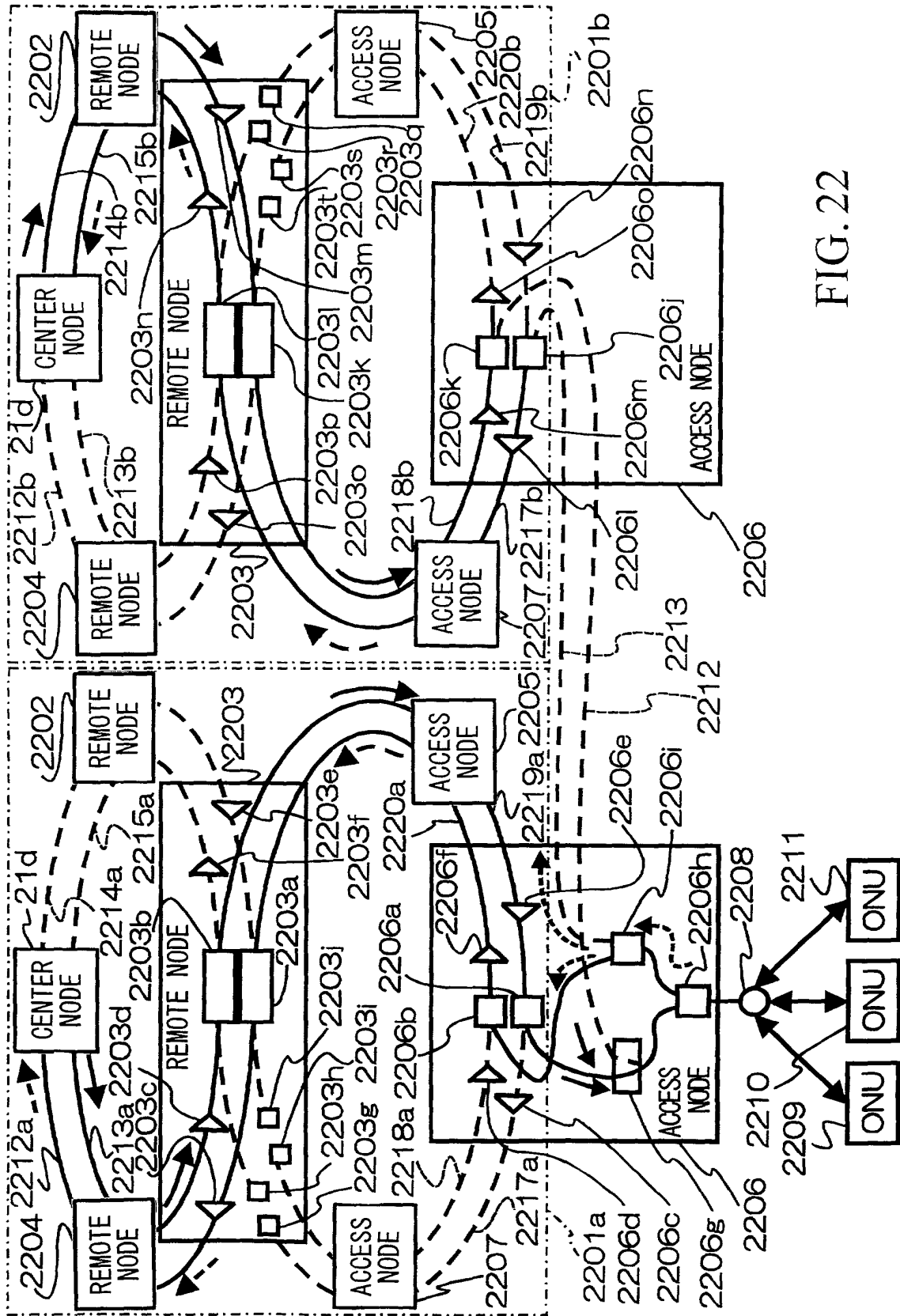
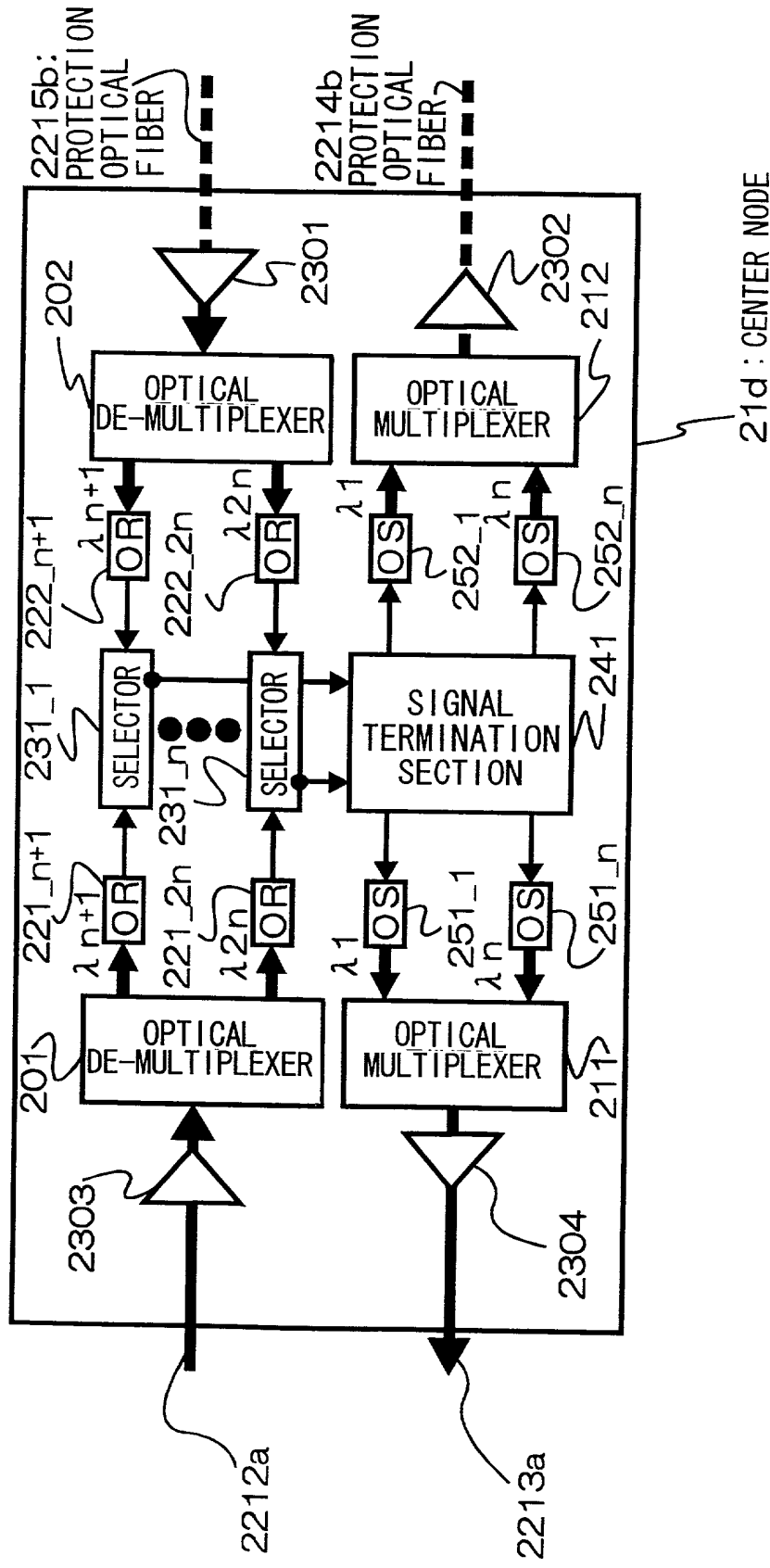


FIG. 22

FIG. 23



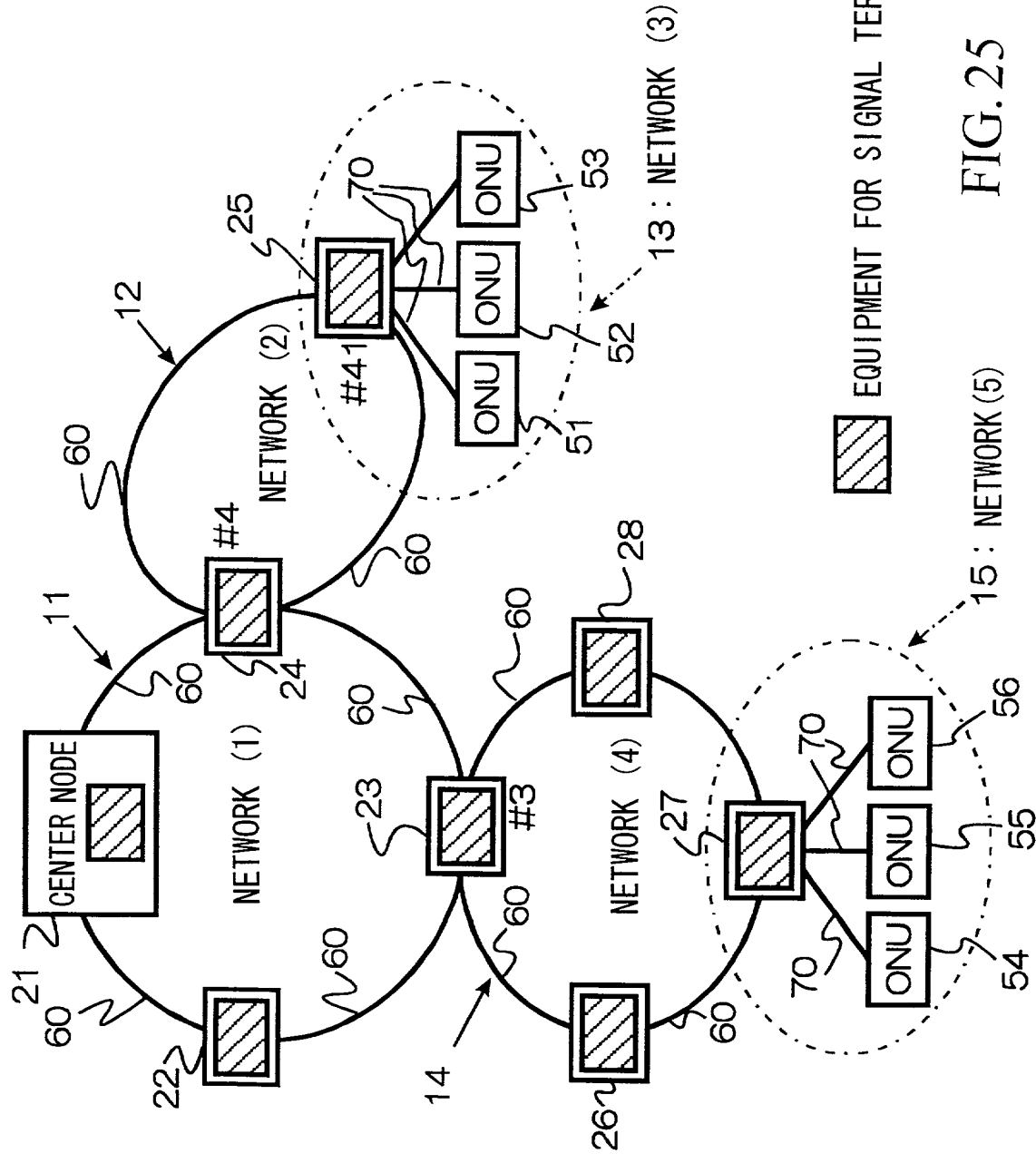
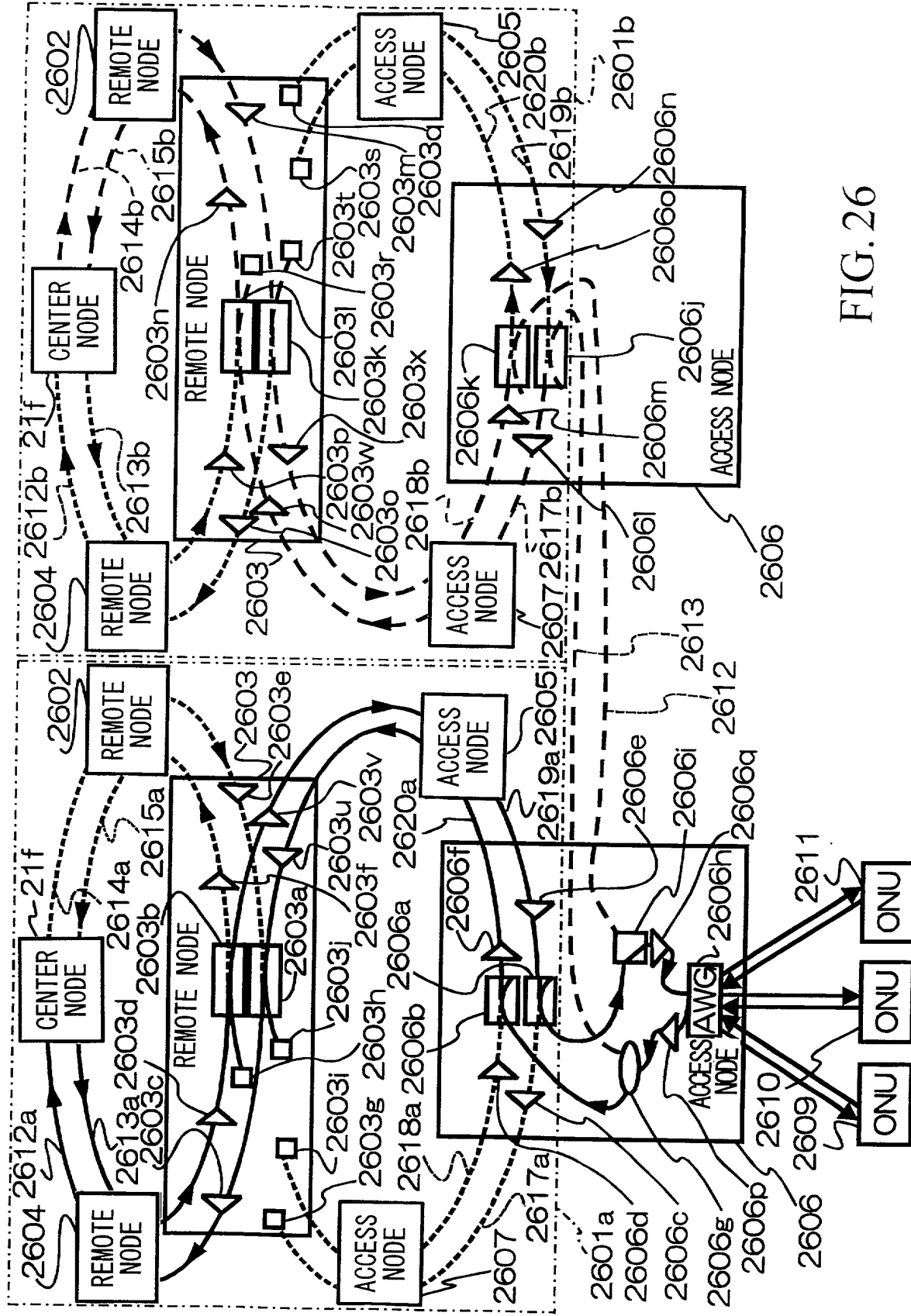


FIG. 25



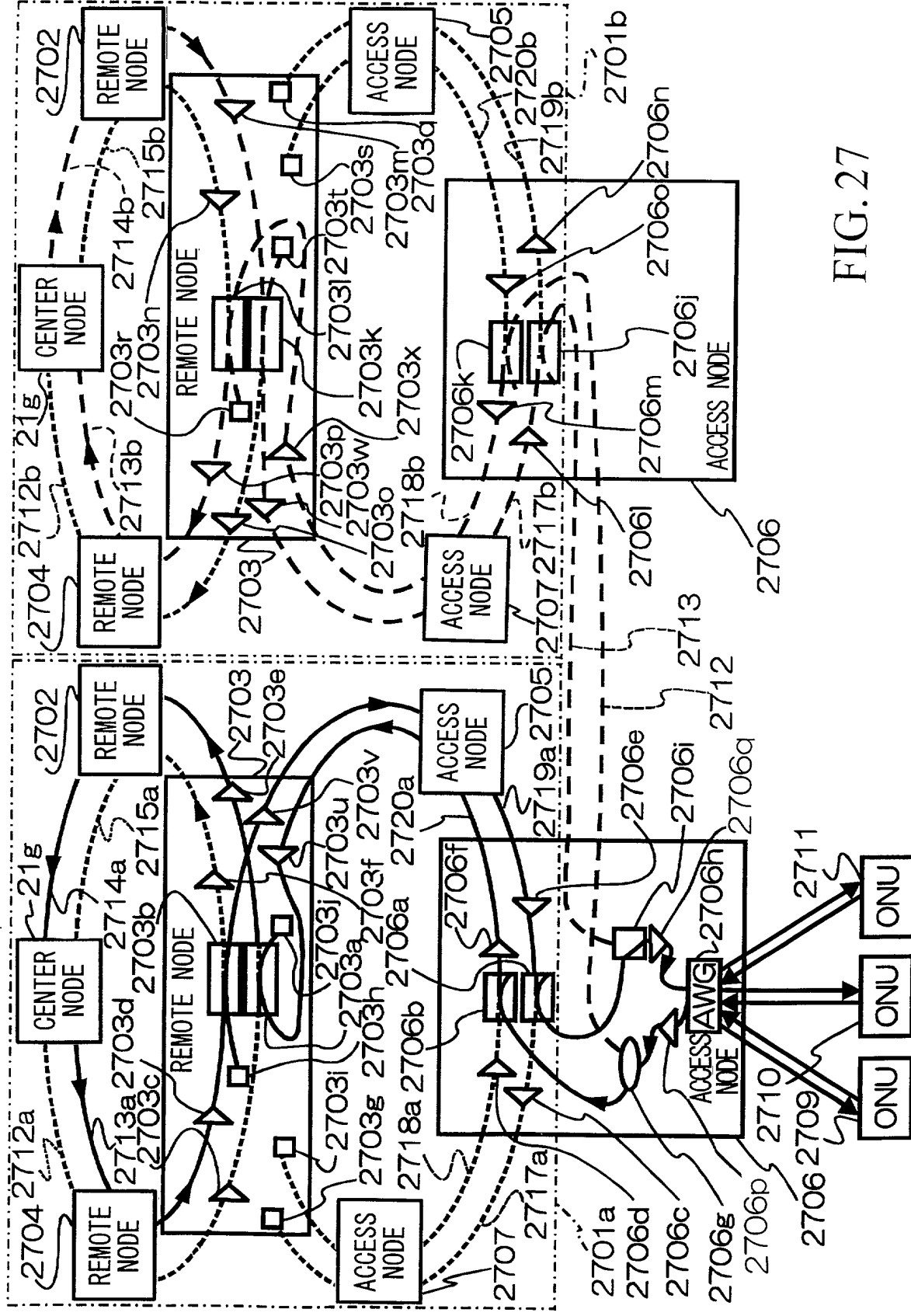


FIG. 27

